

passed from Rodney, Miss., to Oak Point, Manitoba, a distance of 1298 miles, in 48 days, giving an average rate of progress of 27 miles per day. The records for 58 species during the spring of 1883 give an average rate of 23 miles per day. But of course the rate of progress is not uniform for even the same species, it being greater over the northern portion of the route than over the southern, and much greater during some days than others, according to whether the conditions for movement are favorable or otherwise. Also, as would be expected, the late migrants move more rapidly than the early ones.

While Professor Cooke has thus thrown much light upon the manner and coincident phenomena of migration, and made a most valuable contribution to our knowledge of the subject, his limitations in respect to the quality and number of the data at hand give a somewhat pioneer character to his work. His observers were too few and the greater part too untrained to give a satisfactory basis for the task so energetically undertaken; yet his report is a remarkably successful effort, considering the embarrassing circumstances under which he has labored; and we believe that the editor, in his prefatory letter, does not overrate its importance in considering it "the most valuable contribution ever made to the subject of Bird Migration." It gives one a vivid forecast of what may be looked for in forthcoming reports on the same subject, based on the work of many more observers, covering a much longer period.

In closing this notice it would be a grave omission not to call special attention to the model work of Mr. Otto Widmann at St. Louis (see pp. 33-37), and also the important assistance rendered by Prof. D. E. Lantz, of Manhattan, Kansas. A dozen observers like Mr. Widmann, scattered at proper intervals, would give a fairer basis for generalizations than hundreds of observers of the grade on whom Professor Cooke was obliged to depend for many of his data. This should stimulate the more experienced and well qualified field ornithologists to contribute to the fullest degree possible to the furtherance of this important investigation.—J. A. A.

**Nelson's Report upon Natural History Collections made in Alaska.\***—Following close upon Mr. Turner's 'Contributions to the Natural History of Alaska' (see Auk, Vol. V, pp. 409, 410) comes Mr. E. W. Nelson's 'Report' upon his natural history work in the same Territory during the years 1877-1881. Two thirds of this carefully prepared volume, or some 210 pages and 12 colored plates, relate to Alaskan ornithology. Mr. Nelson arrived at St. Michaels, June 17, 1877, which place was his headquarters, and where he passed the greater part of his time, till the last of

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\* Report upon Natural History Collections made in Alaska | Between the years 1877 and 1881 | by Edward W. Nelson. | — | Edited by Henry W. Henshaw. | — | Prepared under the direction of the Chief Signal Officer. | — | No. III. | Arctic Series of Publications issued in connection with the Signal Service, U. S. Army. | With 21 Plates. | — | Washington: | Government Printing Office. | 1887 [= 1888]. 4to., pp. 337. (Birds, pp. 19-230, pls. i-xii, colored.)

June, 1881. Two months of the winter of 1877-78 were spent in exploring the Lower Yukon River and the adjacent coast region. In May, 1879, a trip was made to the Yukon delta, and in February, 1880, a long journey was made up the coast to Sledge Island, situated just south of Bering Straits. In November of the same year an extended expedition into the interior was undertaken, during which the Anvik River country and the region about the head-waters of the Innoko River were explored. While the principal object of these expeditions was the study of the ethnology of the districts visited, zoölogy and geography received much attention. Finally, in the summer of 1881, Mr. Nelson made a trip on the U. S. Revenue Steamer 'Corwin,' as naturalist of the expedition, to Bering Sea and the Siberian Coast. The collections gathered at Saint Michaels and on the various expeditions in Alaska, included "over two thousand bird skins and fifteen hundred eggs." The author says, "To complete the report I have made free use of the skins contained in the Smithsonian collections, obtained by other collectors in Alaska, and the literature on that region has yielded many notes and facts of interest. The author's aim has been so far as possible to embody herein all of importance that is known concerning the birds of Alaska, but for unavoidable causes he has been compelled to curtail that portion relating to the swimming birds subsequent to the ducks and geese."

Mr. Nelson's expeditions entailed great exposure and hardship, with most lamentable results to his health, which gave way very soon after his return to Washington in November, 1881. When compelled to desist from work and seek a more favorable climate in the far West, his ornithological report was well advanced toward completion, but the final touches, and the revision its long-delayed publication has occasioned, had to be made by another hand. This revision and the editorial supervision fortunately fell to Mr. H. W. Henshaw, who appears to have given very careful attention to the final preparation and publication of the work.\*

The 'Introduction' to Mr. Nelson's report treats of the 'General Character and Extent of Alaska, with the Faunal Subdivisions,' of which four are recognized, as follows: 1. Sitkan District, strictly limited to the coast directly affected by the warm southward-flowing Japanese current. 2. Aleutian District, consisting of the Aliaska Peninsula and the Aleutian chain of islands. 3. Alaskan Arctic District, limited to the narrow treeless coast belt along the Arctic coast. 4. Alaskan-Canadian District, embracing the wooded interior.

The number of species treated is 267 (if we have counted them correctly—they are not serially numbered), the text devoted to each varying from a few lines to several pages, largely based on the author's specimens and field notes. The life history of many of the species is treated at length, as is especially the case with several of the Puffins, Geese, Ducks, Phalaropes, Sandpipers, Ptarmigans, etc., from the standpoint

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\*It appears that the results of Mr. Nelson's ethnological work will form the subject of a special volume on the preparation of which he is still engaged.

of the writer's personal experience with them, these biographies being, moreover, very pleasantly written. The immature and other special plumages of many of the species are also described at length. The twelve plates, drawn by Messrs. R. and J. L. Ridgway, are not satisfactory productions, the original colored drawings having been very faultily rendered by the lithographer.

Besides the extended bird matter, the work contains a very important report on the mammals, with the identifications and technical notes by Mr. F. W. True; another on the fishes, with notes by Dr. T. H. Bean; and a third on the Diurnal Lepidoptera, in conjunction with Mr. Harry Edwards.—J. A. A.

**Jordan's New Manual of Vertebrates.\***—The fifth edition of President Jordan's 'Manual of the Vertebrates' of the northeastern United States is practically a new work, not only being entirely rewritten and greatly enlarged, but so far extended in scope as to take in not only a considerably enlarged area (Missouri, Iowa, Minnesota, and the Provinces of Canada), but the marine species of the Eastern Coast from North Carolina to Nova Scotia. While presenting the same size and appearance externally as former editions, it contains probably double the amount of text, through the use of smaller type and a much larger type bed. The plan of the work is also essentially modified, and its general character greatly improved, through the fuller diagnoses given, and the analytical keys being based on structural characters instead of on artificial distinctions. The order of arrangement is also inverted, the fishes being treated first and the mammals last. The latest conclusions seem to be given in respect to questions of classification and nomenclature, and the work thus authoritatively brought down to date. For birds the arrangement and nomenclature of the A. O. U. Check-List is adopted. The reception given former editions shows that the work meets a want, which the new edition must fill to a much greater degree than has been the case heretofore, thus rendering the 'Manual' still more worthy of the large patronage it is sure to receive. The bird part is especially to be commended, in so far as such limited space can give salient and distinctive characters, it being indeed a *multum in parvo*.—J. A. A.

**Sharpe's Birds in Nature.†**—The present volume is elegantly gotten up, as regards typography, paper, and exterior, with elaborate designs in

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\*A Manual of the Vertebrate Animals of the United States, including the District north and east of the Ozark Mountains, south of the Laurentian Hills, north of the southern boundary of Virginia, and east of the Missouri River, inclusive of Marine Species. By David Starr Jordan, President of the University of Indiana. Fifth Edition, entirely rewritten and enlarged. Chicago: A. C. McClurg and Company. 1888. 8vo, pp. iii + 375.

†Birds in Nature. By R. Bowdler Sharpe, F. L. S., F. Z. S., Zoölogical Department, British Museum, etc., etc., etc. With Thirty-nine Colored Plates, and other Illustrations, by P. Robert. Boston: Estes & Lauriat. 1888. 4to. pp. v + 78.